IN THE CLAIMS

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1. (original) A method of fabricating a solenoid assembly for operating at multiple supply voltages and for suppressing voltage transients in a power supply voltage, said method comprising the steps of:

physically configuring a module for use as a mounting device for the solenoid;

mounting the solenoid to a frame using the mounting device;

electrically configuring the module for a desired solenoid performance; and

configuring the module to respond to commands sent from a remote location.

2. (original) A method in accordance with Claim 1 wherein a full-wave bridge rectifier including a plurality of diodes, said step of electrically configuring the module further comprises the step of converting an alternating voltage to a direct voltage using a full-wave bridge rectifier.

3. (original) A method in accordance with Claim 1 wherein a full-wave bridge rectifier including at least a plurality of silicon controlled rectifiers and a plurality of diodes, said step of electrically configuring the module comprises the step of converting an alternating voltage to a direct voltage using a full-wave bridge rectifier.

4. (original) A method in accordance with Claim 1 wherein a full-wave bridge rectifier including a plurality of silicon controlled rectifiers and diodes, and a controller is electrically connected to the plurality of silicon controlled rectifiers, said step of electrically configuring the module comprises the step of turning "on" and "off" the full-wave bridge rectifier by controlling the plurality of silicon controlled rectifiers.

5. (original) A method in accordance with Claim 1 wherein said step of electrically configuring the module comprises the step of filtering an alternating voltage using at least one of a free-wheeling diode, a common mode choke, and a metal oxide varister.

6. (original) A method in accordance with Claim 1 wherein a resistor is electrically connected in series to the solenoid, said step of electrically configuring the module comprises the step of selecting a resistor value for the series resistor.

7. (original) A method in accordance with Claim 1 wherein a resistor is electrically connected in series to the solenoid, said step of electrically configuring the module comprises the step of maintaining a constant voltage across the solenoid by increasing the voltage across the series resistor.

8. (original) A method in accordance with Claim 1 wherein a limit switch is electrically connected to the solenoid, said step of electrically configuring the module comprises the step of determining the solenoid's plunger position using a limit switch.

9. (original) A method in accordance with Claim 1 wherein a Hall effect device is located in proximity to the solenoid, said step of electrically configuring the module comprises the step of determining the solenoid's plunger position using a Hall effect device.

10. (original) A method in accordance with Claim 1 wherein said step of physically configuring a module comprises the step of configuring the module with attachments including openings.

11. (original) A method in accordance with Claim 1 wherein said step of physically configuring a module comprises the step of fabricating the module from at least one of a plastic and a metal.

12. (original) A method in accordance with Claim 1 wherein said step of physically configuring a module comprises the step of configuring the module with a plurality of electrical terminals.

13. (original) A method in accordance with Claim 1 wherein said step of configuring the module to respond to commands sent from a remote location comprises the step of electrically connecting the module to the Internet.

14. (currently amended) A method in accordance with Claim 13 wherein said step of configuring the module to respond to commands sent from a remote location comprises the step of configuring a microprocessor~~the microprocessor~~ to execute a program.

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15. (original) A method in accordance with Claim 13 wherein a communications device is electrically connected to the module said step of configuring the module to respond to commands sent from a remote location comprises the step of accepting commands from at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

16. (original) A method in accordance with Claim 1 wherein said step of configuring the module to respond to commands sent from a remote location comprises the step of configuring the module to store the solenoid's plunger position in memory.

17. (currently amended) A method in accordance with Claim 1 wherein said step of configuring the module to respond to commands sent from a remote location comprises the step of configuring the module to store an activation state of the solenoid~~the solenoid activation state~~ in a memory~~memory~~.

18. (original) A method in accordance with Claim 1 wherein said step of configuring the module to respond to commands sent from a remote location comprises the step of transmitting requested information stored in memory to a communications device for transmission using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

19. (original) An apparatus comprising:

a module comprising a mounting surface;

a plurality of terminals; and

a plurality of attachments, said mounting surface having a circumferential shape to mechanically connect to a solenoid, said plurality of terminals extending along a longitudinal axis of said solenoid, said plurality of attachments extending radially from said solenoid.

20. (original) An apparatus in accordance with Claim 19 wherein the solenoid includes windings, said module electrically connected to said solenoid windings.

21. (original) An apparatus in accordance with Claim 19 wherein said module further comprises an electric circuit housed within said module.

22. (original) An apparatus in accordance with Claim 21 wherein said electric circuit comprises a full-wave diode bridge connected to an alternating voltage source.

23. (original) An apparatus in accordance with Claim 22 wherein said full-wave diode bridge comprises a plurality of diodes.

24. (original) An apparatus in accordance with Claim 22 wherein said full-wave diode bridge comprises at least one of a plurality of silicon controlled rectifiers and a plurality of diodes.

25. (original) An apparatus in accordance with Claim 24 wherein said silicon controlled rectifiers' (SCRs) gates connected to an external controller, said SCRs configured to turn said full-wave bridge "on" and "off".

26. (currently amended) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a plug-in resistor, said resistor~~resister~~ electrically connected in series to said solenoid.

27. (original) An apparatus in accordance with Claim 26 wherein said resistor configured to be a potentiometer.

28. (original) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a transient voltage protection circuit.

29. (original) An apparatus in accordance with Claim 27 wherein said transient protection circuit comprises at least one of a free-wheeling diode, a common mode choke and a metal oxide varister.

30. (original) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a Hall effect device located in proximity to said solenoid.

31. (original) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a limit switch electrically connected to said solenoid.

32. (original) An apparatus in accordance with Claim 30 wherein said electric circuit further comprises a microprocessor electrically connected to said Hall effect device.

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33. (original) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a communications device.

34. (currently amended) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a microprocessor~~said microprocessor~~ interfacing with a memory.

35. (original) An apparatus in accordance with Claim 34 wherein said memory configured to be at least one of a volatile Random Access Memory (RAM), a nonvolatile Random Access Memory, a Programmable Read Only Memory (PROM), and Electrically Eraseable Read Only Memory (EEPROM).

36. (original) An apparatus in accordance with Claim 34 wherein said microprocessor configured to be at least one of a microcontrollers, a reduced instruction set circuits (RISC), and an application specific integrated controllers (ASICs).

37. (currently amended) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a microprocessor~~said microprocessor~~ executing a program.

38. (original) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises said microprocessor executing a program to store a plunger position of said solenoid in memory.

39. (currently amended) An apparatus in accordance with Claim 21 wherein said electric circuit further comprises a microprocessor~~said microprocessor~~ executing a program to store an activation state of said solenoid in a memory.~~said solenoid activation state in memory.~~

40. (original) An apparatus in accordance with Claim 21 wherein said electric circuit configured to interface to at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

41. (original) An apparatus in accordance with Claim 21 wherein said electric circuit comprises a communications device interfacing to at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

42. (original) An apparatus in accordance with Claim 21 wherein said electric circuit configured to accept a command transferred from at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

43. (original) An apparatus in accordance with Claim 21 wherein said electric circuit configured to respond to a command from a remote location using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

44. (original) An apparatus in accordance with Claim 21 wherein said electric circuit configured to transmit said solenoid's plunger position to a remote location using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

45. (currently amended) An apparatus in accordance with Claim 21 wherein said electric circuit configured to transmit an activation state of said solenoid~~said solenoid activation state~~ to a remote location using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

46. (currently amended) A solenoid assembly configured to actuate an automatic transfer switch, said solenoid assembly comprising:

a solenoid; and

a module electrically connected to said solenoid, wherein said module includes at least one plug-in resistor whose values are selected to electrically connect said solenoid to multiple voltages.

47. (original) A solenoid assembly in accordance with Claim 46 wherein said solenoid includes windings.

48. (currently amended) A solenoid assembly in accordance with Claim 46 wherein said module comprises a full-wave bridge rectifier, a transient~~transient~~ voltage protection circuitry, ~~a resistor module,~~ a Hall effect device, and a communications device.

49. (currently amended) A solenoid assembly in accordance with Claim 46 wherein said module further comprises a microprocessor, a memory,~~memory,~~ and a program.

50. (original) A solenoid assembly in accordance with Claim 49 wherein said memory comprises at least one of a volatile Random Access Memory (RAM), a nonvolatile Random Access Memory, a Programmable Read Only Memory (PROM), and Electrically Eraseable Read Only Memory (EEPROM).

51. (original) A solenoid assembly in accordance with Claim 49 wherein said microprocessor comprises at least one of a microcontrollers, a reduced instruction set circuits (RISC), and an application specific integrated controllers (ASICs).

52. (original) A solenoid assembly in accordance with Claim 49 wherein said microprocessor configured to execute a program.

53. (original) A solenoid assembly in accordance with Claim 49 wherein said microprocessor electrically connected to a Hall effect device.

54. (original) A solenoid assembly in accordance with Claim 49 wherein said microprocessor configured to execute a program to store a plunger position of said solenoid in memory.

55. (currently amended) A solenoid assembly in accordance with Claim 49 wherein said microprocessor configured to execute a program to store an activation state of said solenoid in said memory.~~said solenoid activation state in memory.~~

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56. (original) A solenoid assembly in accordance with Claim 48 wherein said full-wave bridge rectifier electrically connected to an alternating voltage.

57. (original) A solenoid assembly in accordance with Claim 48 wherein said full-wave bridge rectifier comprises a plurality of diodes.

58. (original) A solenoid assembly in accordance with Claim 48 wherein said full-wave bridge rectifier comprises at least a plurality of silicon controlled rectifiers and a plurality of diodes.

59. (currently amended) A solenoid assembly in accordance with Claim 55 wherein gates of said silicon controller rectifiers are~~rectifier's (SCRs) gates~~ electrically connected to an external controller, said silicon controller rectifiers~~SCRs~~ configured to turn said full-wave bridge rectifier "on" and "off".

60. (currently amended) A solenoid assembly in accordance with Claim 46~~Claim 48~~ wherein ~~said resistor module comprises a plug-in resistor,~~ said plug-in resistor electrically connected in series to said solenoid.

61. (currently amended) A solenoid assembly in accordance with Claim 46~~Claim 57~~ wherein said plug-in resistor configured to be a potentiometer.

62. (original) A solenoid assembly in accordance with Claim 48 wherein said transient voltage protection circuitry comprises at least one of a free-wheeling diode, a common mode choke and a metal oxide varister.

63. (original) A solenoid assembly in accordance with Claim 48 wherein said module further comprises a limit switch, said limit switch connected to said solenoid.

64. (original) A solenoid assembly in accordance with Claim 46 wherein said module interfaces with at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

65. (original) A solenoid assembly in accordance with Claim 46 wherein said module comprises a communications device interfacing to at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

66. (original) A solenoid assembly in accordance with Claim 46 wherein said module configured to accept a command transferred from at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

67. (original) A solenoid assembly in accordance with Claim 46 wherein said module configured to respond to a command from a remote location using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

68. (original) A solenoid assembly in accordance with Claim 46 wherein said module configured to transmit said solenoid's plunger position to a remote location using at

least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.

69. (currently amended) A solenoid assembly in accordance with Claim 46 wherein said module configured to transmit an activation state of said solenoid~~said solenoid activation state~~ to a remote location using at least one of an internet, an intranet, a T1 line, a dedicated phone link, a DSL line, an ISDN line, a communications cable, satellite technology, and wireless technology.